

Atriplex semibaccata R.Br. (Chenopodiaceae)
Australian Saltbush, Creeping Saltbush

Description. Plants monoecious; perennial, suffrutescent herbs from a deep woody taproot or subshrubs, often mounded; stems 20-150 cm long, prostrate to spreading, branches many, 30-100 cm long. Leaves alternate, subsessile; blades 1-3.5 cm long, 0.2-1 cm wide, elliptic to narrowly ovate, obovate, or oblong, upper surface grayish green, sparsely mealy-puberulent, becoming glabrous, lower surface densely mealy-puberulent, bases tapered to attenuate, margins remotely and irregularly toothed or entire, apices obtuse. Flowers in axillary clusters, staminate ones in terminal spikes or in axillary clusters, pistillate ones axillary, each subtended by 2 bracts, bracts 4-6 mm long and wide, fused to the middle, becoming thick and fleshy in fruit, reddish-tinged to bright red, apices toothed, sometimes with lateral teeth. Seeds of two kinds, brown ones ca. 2 mm long, black ones ca. 1.5 mm long. In California, flowering from April to December. (Abrams 1944, Jepson 1925, Taylor and Wilken 1993, Munz 1959, Wagner et al. 1990, Welsh 1984, Wilson 1984).

Geographic distribution. A native of southern Australia (Chapman 1991, Wilson 1984), it has been introduced into Africa, Tasmania, Chile, Hawaii, the Canary Islands, and the southwestern United States (Abrams 1944, Cepeda-Pizarro 1993, De Villiers et al. 1994, 1997, Khair 1994, Munz 1959, Reed 1969, Valido and Nogales 1994, Wagner et al. 1990, Warren and Aschmann 1993).

Australian saltbush was first introduced into southern California sometime shortly before the end of the 19th century (Eastwood 1901, Jepson 1914, 1925, Robbins 1940). Naturalized populations of *Atriplex semibaccata* occur on all California Channel Islands (Junak et al. 1997), the San Francisco Bay area, and throughout coastal California from San Luis Obispo to San Diego counties and in the southern Central Valley (Anonymous 1998).

Ecological distribution. In its native range, Australian saltbush occurs in heavy, saline soils of various woodlands (Wilson 1984). In naturalized areas it occurs on similar substrates, which have been heavily grazed or disturbed (Abrams 1944, Halvorson 1988, Munz 1959, Taylor and Wilken 1993, Wilson 1984).

Reproductive and vegetative biology. Although the pollination biology of Australian saltbush has apparently not been studied, some monoecious species of *Atriplex* are self-compatible, but generally wind-pollinated (Proctor et al. 1996). Each pistillate flower produces a single seed. The fleshy bracts of Australian saltbush are notably fleshy and attractive to frugivores, which may play an important role in its dispersal. Seeds have been reported as a dietary constituent in both lizards on the Canary Islands and foxes on Santa Cruz Island, California (Valido and Nogales 1994, Crooks, 1994). Seed germination can take place on relatively high saline soils, which provides a competitive advantage when compared to other species (De Villiers et al. 1994). It was reported to be one of the first species to colonize eroded land surfaces on Santa Barbara Island (Halvorson et al. 1988).

Weed status. Australian saltbush is not considered a noxious weed in agricultural practice, at least at a global level (not listed by Holm et al. 1977), but is considered a regional noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996). Lorenzi and Jeffery (1987) did

not list it as a weed in the United States. Judging from some literature, Australian saltbush is one of several preferred plants for reclamation of mine wastes (De Villiers et al. 1994, 1997), for sequestering and subsequent removal of toxic metals (e.g., Selenium; Banuelos 1996, Banuelos and Meek 1990), for use as a forage plant on arid, alkaline soils (Khair 1994), and for revegetating overgrazed rangelands (Warren and Aschmann 1993). It was introduced as a range forage crop on saline soils in the Great Plains as early as 1929 (Headden 1929). Under such conditions it has been judged to be a desirable alien species (De Villiers et al. 1994, 1995, 1997, Warren and Aschmann 1993).

Microbial and insect pathogens. No literature was found that reported Australian saltbush as a host of detrimental fungal or insect pathogens.

Herbicide control. No literature pertinent to herbicide treatment was found.

Other control measures. No literature was found that reported other control methods for Australian saltbush.

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